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SEMINAR

BY

GROUP 2

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TOPIC: SICKLE CELL ANEMIA

GUIDE: PROF. AKINOLA AJOKE

GROUP MEMBERS

1. JONAH ISEOLUWA SEYIDE AU22HL4929
2. KEHINDE PRECIOUS FAITH AU23HL6183
3. ONI SEYON FAVOUR AU22HL4933
4. AJEWOLE BOLUWATIFE AU21AN4320

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INTRODUCTION

- Sickle cell anemia is an inherited disorder of the globin chains that causes hemolysis and chronic organ damage. Sickle cell anemia is the most common form of sickle cell disease (SCD), with a lifelong affliction of hemolytic anemia requiring blood transfusions, pain crises, and organ damage.
- It inhibits the ability of hemoglobin in red blood cells to carry oxygen. Sickle cells tend to stick together, blocking small blood vessels causing painful and damaging complications.

Global burden of mortality and morbidity of sickle cell diseases

- The global burden of mortality and morbidity of sickle cell disease is as follows
- The total sickle cell disease mortality burden was nearly 11 times higher at 376,000 (303,000–467,000) in 2021.
- In children under five, there were 81,100 (58,800–108,000) deaths, ranking total sickle cell disease mortality 12th.
- The number of people living with sickle cell disease globally increased by 41.4% (38.3–44.9), from 5.46 million (4.62–6.45) in 2000 to 7.74 million (6.51–9.2) in 2021.
- Between 2000 and 2021, national incidence rates of sickle cell disease were relatively stable, but total births of babies with sickle cell disease increased globally by 13.7% (11.1–16.5),

The national burden of mortality and morbidity of sickle cell disease

❖ Mortality

- 100,000 annual infant deaths in Nigeria, representing 8% of infant mortality in the country
- Late diagnosis and immunisation gaps contribute to high mortality rates
- Deaths from complications of the disease occur mostly in children under five, adolescents, and pregnant women
- Childhood mortality rate is between 50-80%
- Mortality rate is highest in children, especially in countries with the greatest under-5 mortality rates

❖ Morbidity

- Nigeria has the highest number of people with sickle cell disease
- An estimated 150,000 newborns in Nigeria have sickle-cell disease every year
- 2% of the population has the disease

❖ **Economic burden:**

- High economic burden on families and the healthcare system

- Need for comprehensive strategies to address morbidity and mortality associated with sickle cell disease.

LITERATURE REVIEW

Literature search was conducted using PubMed , science direct , goggle scholar World Health Organization,to Identify

MORTALITY AND MORBIDITY OF SICKLE CELL IN SOUTH WEST NIGERIA

MORTALITY

- SCD is a leading cause of death among children under 5 years in Africa.
- In Nigeria, the median life expectancy is 25-30 years.

MORBIDITY

- Anemia: Chronic anemia leads to fatigue, weakness, and shortness of breath.
- Pain episodes: Recurring pain crises can lead to hospitalization and impact daily life.
- Infections: Increased risk of infections, particularly pneumonia and osteomyelitis.
- Organ damage: SCD can lead to kidney, liver, and spleen damage.

Here are some mortality and morbidity rates for sickle cell disease (SCD) in South West Nigeria:

- Prevalence: 1-3% of the population in South West Nigeria has SCD.
- Pediatric SCD prevalence: 1.0%
- Adult SCD prevalence: 0.63%
- Mortality rate: 50-90% of children with SCD in low- and low-middle-income countries die before their fifth birthday.
- Anemia: 66.7% of SCD patients had moderate-grade anemia, while 27.8% had severe-grade anemia.
- SCD-related complications: 65% of SCD patients were

IMPLICATIONS OF SICKLE CELL ON PUBLIC HEALTH

- High morbidity and mortality rates
- Healthcare burden
- Economic impact
- Social stigma
- Reproductive health
- Mental health

CHALLENGES OF SICKLE CELL.

- Chronic pain
- Organ damage
- Delayed growth and development
- Mental health
- Social stigmaLimited access to healthcare
- High healthcare costs
- Limited awareness and education
- Limited treatment options

SOLUTION ACCESS TO CRITICAL SERVICES OF SICKLE CELL

1. Increase awareness and education
2. Improve access to healthcare
3. Newborn screening
4. Genetic counseling
5. Blood transfusion services

RECOMMENDATIONS

- Prevention and prompt management of crises and infections.
- Newborn screening programs to detect SCD early.
- Genetic counselling and testing for family affected by SCD
- Access to safe blood transfusion services
- Education Awareness about SCD management and treatment for healthcare providers patients and families.

CONCLUSION

Sickle cell disease is associated with high mortality and mortality in South West Nigeria, particularly in the pediatric age group .The study highlights the need for improved management and treatment practices,as well as public health interventions to reduce the burden of SCD in the region

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